

**Notice of Allowability**

|                               |                                |                  |
|-------------------------------|--------------------------------|------------------|
| <b>Notice of Allowability</b> | Application No.                | Applicant(s)     |
|                               | 10/038,246                     | BROOKING ET AL.  |
|                               | Examiner<br>Lan-Dai Thi Truong | Art Unit<br>2152 |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1.  This communication is responsive to 06/14/2007.
2.  The allowed claim(s) is/are 1,3,4,6-17 and 19.
3.  Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a)  All
  - b)  Some\*
  - c)  None of the:
  1.  Certified copies of the priority documents have been received.
  2.  Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3.  Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

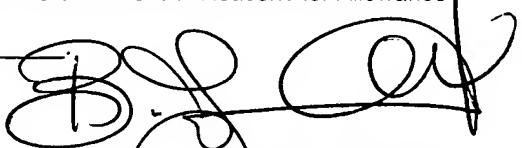
\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4.  A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5.  CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
  - (a)  including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
    - 1)  hereto or 2)  to Paper No./Mail Date \_\_\_\_\_.
  - (b)  including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6.  DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1.  Notice of References Cited (PTO-892)
2.  Notice of Draftsperson's Patent Drawing Review (PTO-948)
3.  Information Disclosure Statements (PTO/SB/08),  
Paper No./Mail Date \_\_\_\_\_
4.  Examiner's Comment Regarding Requirement for Deposit  
of Biological Material
5.  Notice of Informal Patent Application
6.  Interview Summary (PTO-413),  
Paper No./Mail Date \_\_\_\_\_
7.  Examiner's Amendment/Comment
8.  Examiner's Statement of Reasons for Allowance
9.  Other \_\_\_\_\_

  
BUNJOB JAROENCHONWANIT  
SUPERVISORY PATENT EXAMINER

### **DETAILED ACTION**

1. This action is response to communications: application, filed 01/03/2002; amendments filed 06/14/2007. Claims 1, 3, 4, 6-17, 19 are pending; claims 1, 4, 8, 13, 17, 19 are amended; claims 2, 5, 18, 20 are canceled

### **EXAMINER'S AMENDMENT**

2. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

3. Authorization for those examiner's amendments were given in a telephone interview with Agent Bhavani Rayaprolu, Reg. no. 56583 on September 25, 2007 at 1:30 PM.

4. The claims have been amended as follows:

Claim 18: (canceled)

Claim 20: (canceled)

**Claim 1:** A protocol diagnostic system, comprising:

a data stream monitor component that accesses raw network data and copies at least one protocol specific subset of the raw network data;

a diagnostics engine comprising at least one protocol state compressor that analyzes the at least one protocol specific subset of the raw network data, the protocol specific subset of raw network data being correlated with the protocol state compressor, the diagnostics engine determines condition of network connectivity, and the data stream monitor component utilizes at least one lexical rule set associated with the at least one protocol state compressor to determine subsets of the raw network data to copy, that at least one lexical rule set stores at least one of information regarding structure of subsets of the raw network data and protocol specific information, and

where the diagnostic engine, upon initialization, stores information associated with protocols to be monitored in that at least one lexical rule set, upon occurrence of a network connectivity problem, stores information associated with additional protocols, and upon correction of the network problem, deletes information associated with selected protocols from the at least one lexical rule set; and

an event correlator that receives results of analysis of the protocol state compressor, the event correlator correlates the results to detect a system problem

**Claim 13:** A method that facilitates network diagnostic, comprising:

accessing at least one lexical rule set coinciding with a protocol to be monitored ~~by a corresponding protocol state compressor and copying raw data frames coinciding with the at one least lexical rule set by a data stream monitor component; wherein the lexical rule set stores at least one of information regarding structure of data frames and protocol specific information~~

multiplexing the copied raw data frames by the data stream monitor component;

demultiplexing the copied raw data frames based at least in part upon the at least one lexical rule set by a data stream distribution engine;

providing the copied raw data frames to a protocol state compressor comprised in a diagnostic engine;

using the protocol state compressor to analyze corresponding copied raw data frames utilizing at least in part the corresponding lexical rule set; and

storing and deleting information associated with protocols to be monitored in the at least one lexical rule set, where upon occurrence of the network connectivity problem, information associated with addition protocols is stored, and upon correction of the network problem, the information associate with addition protocols is deleted from the at least one lexical rule set;

receiving correlating information received at an event correlator from the protocol compressor to facilitate diagnosis of health status of a system

**Claim 4:** A method that facilitates network diagnostics, comprising:

accessing raw real-time network data and copying at least one subset of the raw real-time network data by a data stream monitor component;

selectively providing copied subset of the raw real-time network data to the protocol state compressors comprised in a diagnostics engine based at least in part upon lexical rule sets corresponding to the protocol state compressors, the lexical rule sets store at least one of information regarding structure of subsets of the raw real-time network data and protocol specific information;

storing and deleting information associated with protocols to be monitored in the lexical rules sets, where upon occurrence of a network connectivity problem, information associated with addition protocols is stored, and upon correction of the network problem, the information associated with the additional protocols is deleted from the lexical rule sets;

using the protocol state compressors to analyze the respective subset of the raw real-time network data;

diagnosing health status of a system based at least in part upon the analysis of the at least one of the protocol state compressors

**Claim 8:** A computer network diagnostic system, comprising:

a data stream monitor[[/]] or multiplex component that accesses real-time network data, selectively determines at least one subset of the real-time network data to multiplex based at least in part upon at least one lexical rule set; the lexical rule sets store at least one of information regarding structure of subsets of the raw real-time network data and protocol specific information;

a data stream distribution engine that demultiplexes the multiplexed data based at least in part upon the at least one lexical rule set; and

a diagnostic engine having a plurality of protocol state compressors, the protocol state compressors being associated with the at least one lexical rule set, the protocol state compressors analyzing their respective subsets of demultiplexed data received from the data stream distribution engine, the diagnostic engine further including an event correlator [[/]] or inference engine that receives results of the analysis of the plurality of protocol state compressors, the event correlator [[/]] or inference engine correlates the results to detect a system problem; and

wherein the diagnostic engine, upon occurrence of a network connectivity problem, ~~instantiates one or more~~ stores information associated with additional protocols state compressors, and upon correction of the network problem, selectively deleted ~~information associated with one or more of~~ the additional protocols state compressors and associated from the at least one lexical rule set[[s]]

**Claim 17:** A diagnostic engine for a server of a computer system, comprising:

a plain language notification data information store storing plain language notification information associated with a plurality of potential server problem;

a data stream monitor component that accesses raw network data and copies at least one protocol specific subset of the raw network data;

a protocol specific event information data store storing information associated with a server health status;

a diagnostic engine comprising at least one protocol state compressor that analyzes the at least one protocol specific subset of the raw network data, the protocol specific subset of raw network data being correlated with the protocol state compressor, the diagnostics engine determines condition of network connectivity, and the data stream monitor component utilizes at least one lexical rule set that stores information regarding structure of subsets ~~the at least one protocol specific subset of the raw network~~ [[of]] data and protocol specific information, where upon occurrence of a network connectivity problem, information associated with additional protocols is stored, and upon correction of the network problem, information associated with the additional protocols is deleted from the at least one lexical rule set; and

a self healing component that analyzes information stored in the protocol specific event information to determine at least one of appropriate corrective action and appropriate plain language notification, the plain language notification based at least in part upon information stored in the plain language notification data store

**Claim 19:**

A computer storage readable medium having computer usable components for protocol diagnostics engine, comprising:

a data stream monitor[[/]] or multiplex component that access real-time network data,  
selectively determines at least one subset of the real-time network data to multiplex based at least  
in part upon the at least in part upon the at least one lexical rule set; the lexical rule sets store at  
least one of information regarding structure of subsets of the raw real-time network data and  
protocol specific information;

a data stream distribution engine that demultiplexes the multiplexed data based at least in part upon the at least one lexical rule set; and

a diagnostics engine having at least one protocol state compressor[[s]], the protocol state  
compressor being associated with at least one lexical rule set, the protocol state compressor  
analyzing respective subsets of demultiplexed data received from the data stream distribution  
engine, where the diagnostic engine, upon initialization, stores information associated with  
protocols to be monitored in the at least one lexical rule set, the diagnostic engine, upon  
occurrence of a network connectivity problem, stores information associated with additional  
protocols, and the diagnostic engine, upon correction of the network problem, deletes  
information associated with selected protocols from the at least one lexical rule set; and

An event correlator[[/]] or inference engine that receives results of the analysis of the protocol state compressor, the event correlator [[/]] or inference engine correlates the results to detect a system problem

### **Reasons for allowance**

With respect to claims 1, 4, 8, 13, 17, 19. The prior arts of record, singly or in combination fails to teach the feature of claim(s) limitations thereof. Specially, *inter alia*, it fails to teach a protocol diagnostic system, comprising a data stream monitor component that accesses raw network data and copies at least one protocol specific subset of the raw network data; a diagnostics engine comprising at least one protocol state compressor that analyzes the at least one protocol specific subset of the raw network data, the protocol specific subset of raw network data being correlated with the protocol state compressor, the diagnostics engine determines condition of network connectivity, and the data stream monitor component utilizes at least one lexical rule set associated with the at least one protocol state compressor to determine subsets of the raw network data to copy, that at least one lexical rule set stores at least one of information regarding structure of subsets of the raw network data and protocol specific information, and where the diagnostic engine, upon initialization, stores information associated with protocols to be monitored in that at least one lexical rule set, upon occurrence of a network connectivity problem, stores information associated with additional protocols, and upon correction of the network problem, deletes information associated with selected protocols from the at least one

lexical rule set; and an event correlator that receives results of analysis of the protocol state compressor, the event correlator correlates the results to detect a system problem

Claims 3-4, 6-7, 9-12, 14-16 further limit the allowed claims, therefore they are also allowed

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance"

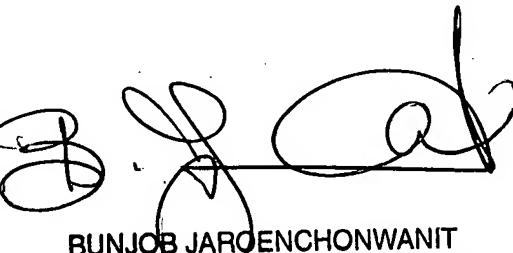
## **Conclusions**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lan-Dai Thi Truong whose telephone number is 571-272-7959. The examiner can normally be reached on Monday- Friday from 8:30am to 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bunjob A. Jaroenchonwanit can be reached on 571-272-3913. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

09/25/2007

  
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SUPERVISORY PATENT EXAMINER  
